## SARS Preparedness and Response

- U.S. Experience
- Lessons learned
- Process
- Overview of plan





### SARS CoV+/- Cases, U.S. 2003

Type of Case	<u>No.</u>	CoV+*	<u>CoV-</u>	Pending
Probable	74	8	38	28
Suspect	344	0	169	175





<sup>\*</sup>Based on SARS antibody + or – at  $\geq$  28 days

# Transmission of SARS: United States, 2003

- 1/10 household contacts SARS-CoV antibody + (?exposure)
- 0/103 healthcare worker contacts
  - 39% with ≥1 unprotected direct skin contact
  - 44% with ≥1 close contact exposures without a mask
  - 70% with ≥1 close contact exposures without goggles





## SARS Preparedness: Lessons learned

- SARS is a serious disease with potential for rapid, global spread
- Transmission is <u>variable and localized</u> (no spread/superspreaders; community and specific setting within a community, e..g. hospital)
- If detected, spread <u>can be prevented</u> (isolation, infection control, sometimes quarantine)
- Risk of exposure it key to diagnosis of SARS (1. most cases have history of exposure to a case or setting; 2. indistinct clinical features)
- The vast majority of febrile respiratory illnesses will not be SARS CoV
- Laboratory tests for SARS CoV are good but <u>limited</u> (level of virus, time to mount an antibody response, risk of contamination, dual infections)





### SARS Preparedness & Response Plan: Process

- Federal Government's Concept of Operations Plan
- Existing preparedness and response plans
  - Pandemic influenza, smallpox, BT
  - State and local planning; WHO planning
- Lessons learned from spring 2003
- Consultation, advise, and comments from stakeholders





## SARS Preparedness and Response: Key Concepts

- Surveillance and containment control strategy
- Minimize unnecessary social disruption
- Community, federal, and global coordination/cooperation
- Real-time assessment of the status of SARS transmission





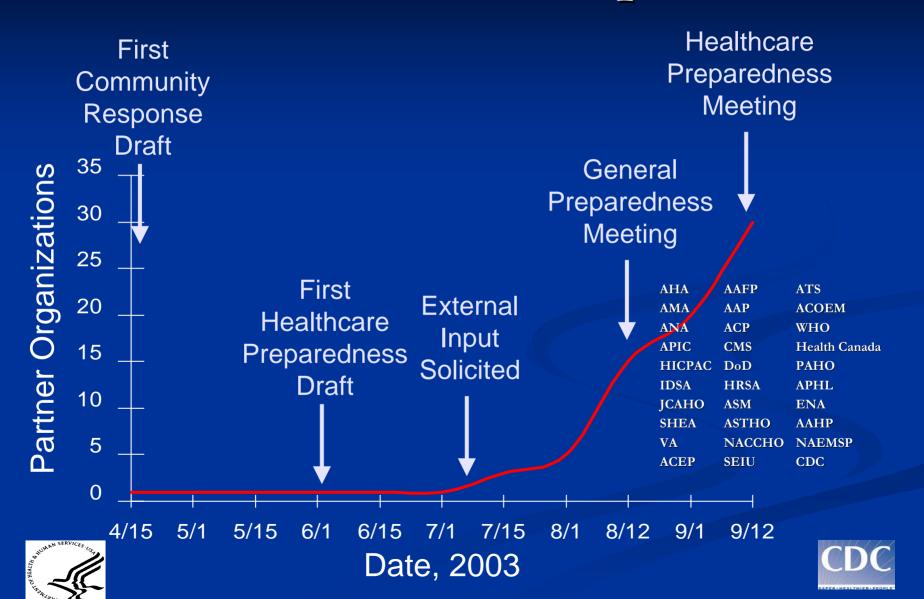
## Meetings, Discussions, and Information

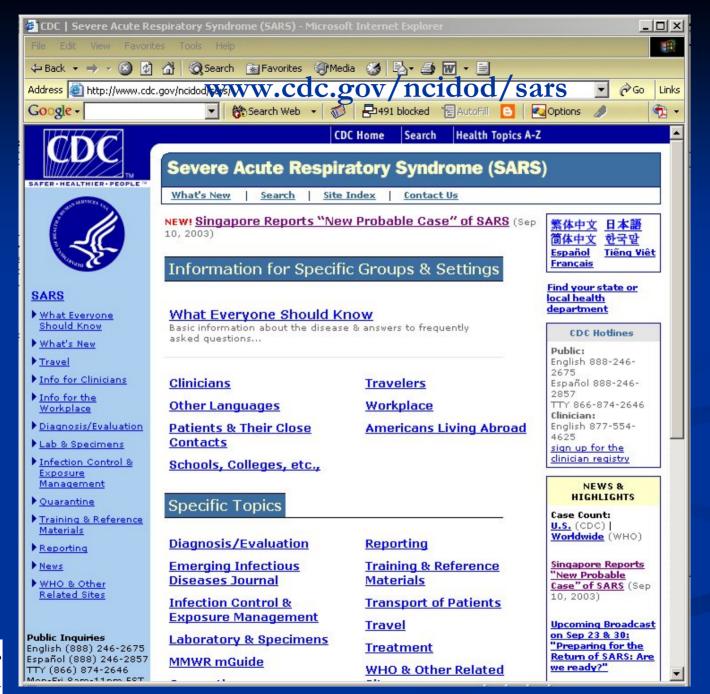
- Conference calls
- Sharing draft documents
- Meetings
  - SARS Preparedness Meeting, Aug 12-13, 2003
  - SARS Health Care Partner Meeting, Sep 12, 2003
  - SARS Laboratory Group Meeting, Sep 18, 2003
  - Partner-hosted meetings
- Satellite broadcasts (Sep 23 and Sep 30, 2003)
- Public Health Grand Rounds (Oct 23, 2003)





## Process and Participation









# Components of SARS Preparedness Planning

- Surveillance
- Clinical (clinical features, pulmonary care guidelines, anti-viral Rx protocols, algorithms)
- Healthcare
- Community
- Laboratory
- Special research studies
- Information technology
- Communication and education





#### Surveillance Activities

#### Core activities

- Surveillance for cases
  - Astute clinician/surveillance for LRI in HCWs
  - Hospitalized LRI
  - Risk of exposure (global, community, institution)
    - Community/work exposures (e.g. healthcare worker)
    - Travel exposures
    - Undetected source of SARS (atypical pneumonia clusters, e.g. HCW/families)
- Contact tracing
- Rapid and efficient reporting and dissemination of information
- Real-time assessment of SARS transmission

#### Enhanced activities

- Fever clinics
- Screening in communities, institutions, transportation centers





## Health Care Setting Activities

#### Core activities

- Isolation; contact, droplet, airborne precautions; decontamination procedures
- Patient transfer and staffing strategies
- Hospital command/control strategies
- Surge capacity beds, respiratory isolation, staff
- Communication/cooperation between clinical/hospital and public health

#### Enhanced activities

- Designated SARS wards/floors
- HCW temperature screening
- Hospital-wide PPE





## Community Containment Activities

- Core activities
  - Isolation of ill patients (home/hospitals)
  - Monitoring contacts
- Enhanced activities (Inability to quickly/effectively isolate ill contacts)
  - Quarantine
    - Home (other site) quarantine
    - Work quarantine (work to home to work)
    - Exclusion orders
  - Issues
    - Education about need and rationale
    - Legal authority
    - Support food, supplies, mental health, financial





## Laboratory Activities

- Core activities
  - Strategies for testing
    - PCR/serology
    - Specimen type, timing, handling, processing
  - Quality of testing
    - Validated assays
    - Proficiency testing
  - Interpretation of test results
    - Confirmation of test results (multiple specimens, chain of custody)
    - Clinical/epidemiologic/laboratory data
  - Biosafety guidelines
- Surge capacity (Local and federal)





## SARS Preparedness: Comments

- Unknown future
- Preparedness for SARS has benefited from other preparedness efforts and visa versa
- SARS during spring 2003 provides a solid foundation for preparedness planning



